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Liebert®
Keeping Business in Business™

PowerSure™ Personal XT

450, 700, 1250 VA
230V

USER MANUAL

English / Deutsch / Français / Italiano / Español

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IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

This manual contains important safety instructions that should be followed during the installation and maintenance of the UPS and its batteries. Please read this manual thoroughly before attempting to install or operate this UPS.

This equipment can be installed and operated by individuals without previous training.

1. PowerSure Personal XT models are available for 230VAC supply voltages and loads. Please verify that this model matches your AC mains/ load voltage requirements.

2. This equipment is designed for Commercial/Industrial use only. Liebert Corporation neither recommends nor knowingly sells this product for use in critical life support applications.

3. The PowerSure Personal XT 230VAC models are not supplied with an input power lead for connection to the mains supply. Use the input mains power lead from your data processing equipment to connect the UPS to the mains supply. The UPS is supplied with two output power leads with moulded connectors to connect from the UPS output to your equipment. Additional input/output leads can be obtained from your dealer.
   Also provided is a Liebert special interconnection cable for connection to DB9 connector on the rear of the UPS for use with Liebert's SiteNet MultiLink® software (see user manual for details) DO NOT USE FOR OTHER APPLICATIONS. Store in safe place if not required at this time.

4. This UPS must be earthed at all times during operation. Connect only to a mains supply socket outlet with an earth connection. A means of disconnection of the mains supply should be within 2 metres of the UPS.

5. WARNING: Output receptacles on the UPS are electrically live if the UPS is switched ON, even if the UPS is not plugged in to a mains supply. The On/Off button on the UPS does not electrically isolate the internal parts. To isolate the UPS, switch OFF the UPS first, then unplug it from the mains.

- To reduce the risk of electric shock, do not remove the cover, as it has no user-serviceable parts inside. Some components are live, even when AC power is disconnected. For service, contact a qualified technician.
- To reduce the risk of fire, use the proper rating when replacing the fuse.
- To prevent the risk of fire or electric shock, install the UPS in a temperature and humidity controlled room, free of conductive contaminants.

6. Your total load earth leakage current must not exceed 3.5 milli-amperes. Most data processing equipment meets this requirement if you use no more than 2 pieces of equipment. For further advice contact your dealer.

7. The UPS relies on your building wiring overcurrent protection, which must be rated between 10-20 amperes.

8. When using the communication features on the UPS, ensure the cabling connected to the DB9 communication port or the network connection are kept separated by 25mm from the power leads to the UPS input and output.

These units bear TUV GS mark, CE mark and comply with the following standards (limits value class B):

EN 60950 (1998.8),
EN 50091-1 (1994.4),
EMI/RFI: EN550222 class B
EMS: IEC 1000-4-2 (ESD) Level 3
IEC 1000-4-3 (RS) Level 3
IEC 1000-4-4 (EFT) Level 3
IEC 1000-4-5 (Lightning surge) Level 3

CAUTION:
Although your UPS has been designed and manufactured to assure personal safety, improper use can result in electrical shock or fire. To insure safety, please observe the following rules:

- Turn off and unplug your UPS before cleaning. Do not use liquid or aerosol cleaners. A dry cloth is recommended to remove dust from the surface of your UPS.
- Do not install or operate your UPS in or near water.
- Do not place UPS on an unstable cart, stand, or table.
- Do not place UPS under direct sunlight or close to heat emitting sources.
- Do not place UPS power cord in any area where it may get damaged by heavy objects.
- Follow all warnings and instructions marked on the UPS. Do not attempt to service the UPS, as it has no user-serviceable parts inside. Refer all repairs to qualified service personnel.

ATTENTION:
Turn off and unplug your UPS from the outlet and contact qualified service personnel if:

- The power cord or plug is damaged.
- Liquid has been spilled on the UPS.
- The fuse blows frequently.
- The UPS does not operate even when user follows the operating instructions.

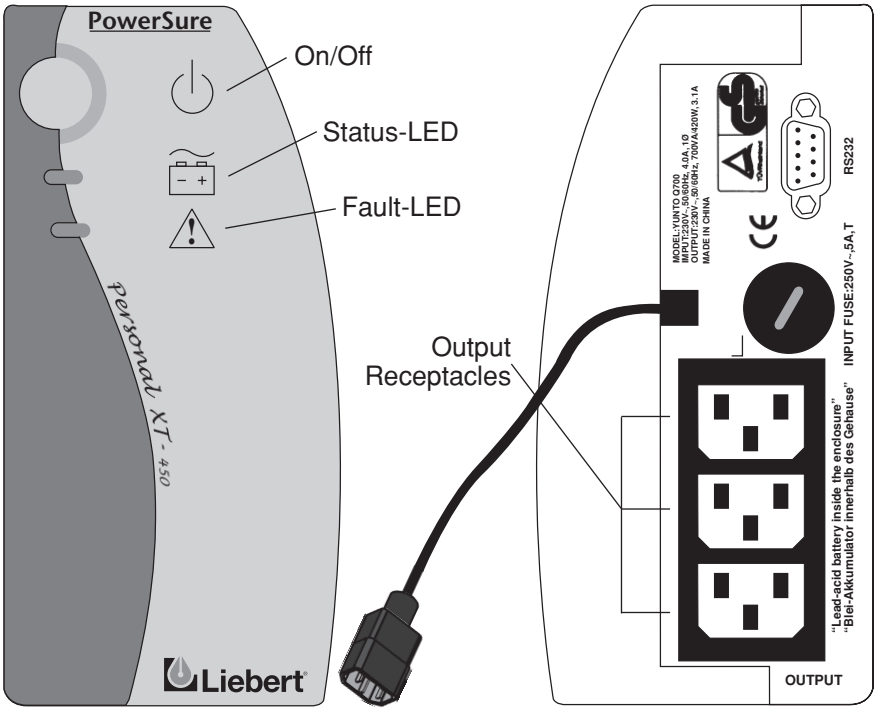
CONDITIONS OF USE:
Your UPS provides conditioned power to connected equipment. Maximum load must not exceed that shown on UPS rating label. If uncertain, consult your distributor or Liebert.

Placing magnetic storage media on top of the UPS may result in data corruption.

INTRODUCTION & SYSTEM DESCRIPTION

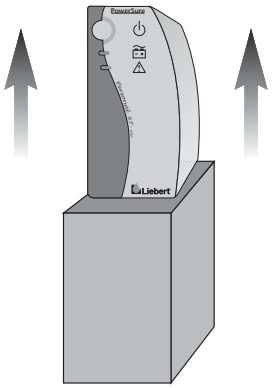
Congratulations on your choice of the Liebert PowerSure Personal XT Uninterruptible Power System (UPS). It provides conditioned power to microcomputers and other sensitive electronic equipment.

MAJOR COMPONENTS

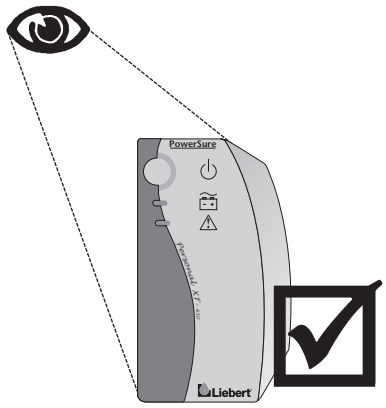


FRONT **BACK**

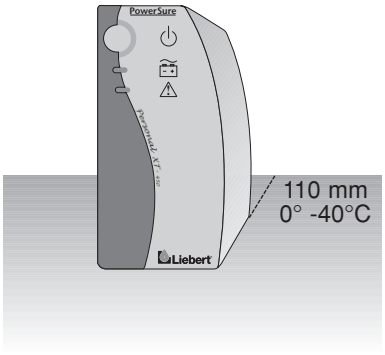
GENERAL INSTALLATION

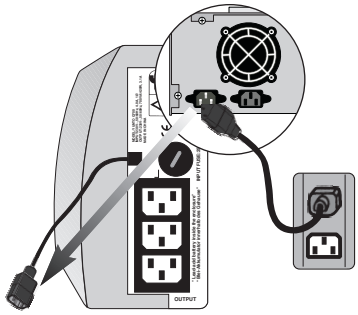


Remove from Box

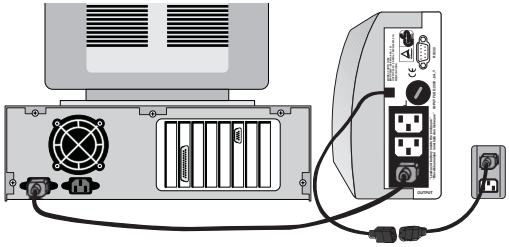


Check for Damage

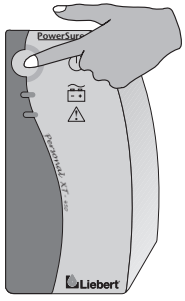




Remove Plug from Units and replace in UPS



Plug Units(s) into UPS



Press ON Button

NORMAL MODE OPERATION

1. Inspect the packaging carton and its contents for damage. Please inform the trasport agency immediately should you find signs of damage.
   Please keep the packaging in a safe for future use.

2. Plug the UPS into a wall outlet (see figure 1). Let the UPS charge the battery for at least 2 hours. You may use the UPS while the battery charges, but the UPS backup time will be reduced until the battery is fully charged. It will take up to 8 hours to charge the fully discharged battery

3. To start up the UPS, press the On/Off switch. When the UPS start, it will beep an both LEDs of the front panel will light up for 2 seconds. The green light up continuously. This indicates normal operation.

   Note:
   If the UPS continues to beeps, or the green light is not alight even mains power is available, please see the chapter Troubleshooting for more information.

4. Switch off the equipment you want to protect, and connect it to the outlets of the UPS.

5. Switch on the protected equipment, one piece per time.

BATTERY MODE OPERATION

Battery mode occurs in event of extreme input mains conditions or a complete mains failure. During Battery mode the Mains / Battery LED (green) will flash every 4 seconds and an alarm will sound every 4 seconds. This will change to a beep every second when the battery runs low (approximately 2 minutes remaining).

WARNING: Turning off the UPS while in Battery mode will result in loss of output power.

LED & ALARMS

The front panel LEDs and audio beeps indicate the UPS status.

Switch and LEDs	Symbol	Function
On/off		Turn the UPS system an and off.
Status-LED (green)		1. *Steady:* Input power is acceptable; the UPS is in normal mode (online) 2. *Blinking:* Input power is out of tolerance; the UPS is battery mode. 3. *Off:* No input power or the battery is exhausted or the UPS is switched off.
Fault-LED (red)		1. *Blinking:* The UPS is overloaded or has failed at battery test. 2. *Steady:* UPS fault.

Switch and LEDs	Function
Beep continuously for 2 sec.	Starting up the UPS.
1 beep every 4 sec.	Power failure: UPS is battery mode.
1 beep every sec.	Battery low: UPS is in battery mode, batteries are nearly axhausted, and UPS will be shut down.
1 beep every 2 sec.	Battery weak: UPS is normal mode (online), battery is not fully charged, backup time during power failure shorter than nominal value.
3 beep every 2 sec.	Battery replacement: battery needs to be replaced.
2 beep every 2 sec.	Charger fault: UPS cannot recharge the battery. See chapter Troubleshooting for more information.
1 beep every half sec.	Overload. See chapter Troubleshooting for more information.
Continuous	Fault: please contact your dealer.

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TROUBLESHOOTING

If the UPS fails to operate properly, turn off the unit and repeat the steps in the installation section of this manual. If the problem persists, refer to the chart below:

PROBLEM	POSSIBLE CAUSE	REMEDY
No indication, no beep even UPS is connected to mains power supply	No input voltage	Check building wall outlet and mains cable by connecting another device with cable to this wall outlet
	Fuse has been melt	Replace fuse by fuse with same rating
Green LED blinks, red LED off, 1 beep every 4 sec.	Mains power failure	Wait until mains power recovers
	UPS input power cord not plugged in	Make sure the power cord is connected
	Power cord defective	Please contact your dealer
Grenn LED blinks, red LED off, 1 beep every sec.	very low battery voltage	Plug the UPS into a working wall outlet for at least 8 hours to recharge the batteries. If the problem still rmains, the UPS will not operate during power failure, or it will turn off immediately. In this case, contact your dealer
Grenn LED lights up, red LED blinks, 2 beep every 2 sec.	Battery cannot be charged	Please contact your dealer
Grenn LED lights up, red LED blinks, 1 beep every half-sec.	The power required from the equipments is too high	Remove equipment until the UPS stops beeping
Green LED off, red LED lights up, continuous beeps	Output short circuit	Remove alla off the equipments and contact your dealer
	Overload exceeds 120%	Reduce the load
	UPS fault	Contact your dealer

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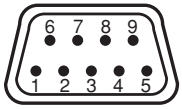
COMMUNICATIONS

You can use MultiLink™ Software to allow your UPS to communicate to your computer via your DB-9 communications port. A MultiLink Software CD is included in the box, or you can download it from our web site at www.liebert.com.

The PowerSure™ Personal XT UPS contains a standard DB-9 receptacle located on the rear of the UPS unit. Several signals are provided on this port and are assigned as follows:

PIN	ASSIGNMENT DESCRIPTION
1	Low Battery (open collector)
2	No connection
3	No connection
4	Remote Shutdown (5-12V); on battery operation
5	Common
6	Remote Shutdown (short to pin5); any mode operation
7	Low Battery (open emitter)
8	AC Fail (open emitter)
9	AC Fail (open collector)

PIN Assigment



The DB-9 communication port allows:
- the status of UPS to be monitored,
- data to be backed up,
- computer to be switched off

MAINTENANCE

The PowerSure Personal XT UPS requires very little maintenance. The batteries are valve regulated, nonspillable, lead acid, and require that they be kept charged to obtain their designed life. When connected to the mains supply, the battery is continuously charged.

When storing the UPS for any length of time, it is recommended to plug in the UPS for at least 24 hours every four to six months to ensure full recharge of the batteries.

Battery disposal - When the battery life is expended (see alarm indications), dispose of the discarded batteries in accordance with local environmental laws.

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230V SPECIFICATIONS

ELECTRICAL SPECIFICATION			
Model Number	PSPXT450-230	PSPXT700-230	PSPXT1250-230
INPUT			
Voltage	230 VAC (197 - 262 VAC)		
Frequency	50 Hz ± 4Hz; 60 Hz ± 4Hz		
Amperage (maximum)	2.6 A	4.0 A	7.0 A
Phase	12 ϕ 2W, Ground		
OUTPUT			
Power rating	450 VA - 270 W	700 VA - 420 W	1250 VA - 750 W
Voltage	230 VAC ± 10%		
Frequency	50 Hz ± 1Hz; 60 Hz ± 1Hz		
Wave form	STEP		
Overload protection	Line mode $\geq$ 105%, $\leq$ 130% load, 3 minutes to fault		
	Line mode > 130% load, 7s to fault		
	Battery mode $\geq$ 105%, $\leq$ 120% load, 20s to shutdown		
	Battery mode > 120% load, 5s to shutdown		
BATTERY PARAMETERS			
Model Number	PSPXT450-230	PSPXT700-230	PSPXT1250-230
Type	Valve-regulated, nonspillable, lead acid		
Quantity x Voltage x Rating	(1) x 12V x 7 Ah	(1) x 12V x 9 Ah	(2) x 12V x 7 Ah
Approved Battery Manufacturers:	CSB, Panasonic, BB Battery and Yuasa		
Transfer Time	2 - 6 ms typical		
Operating Back-up time	>10 minutes		
Recharge time	8hr up to 90%		
DIMENSION AND WEIGHTS			
Dimensions wxhxd (mm)	80*176,5*233	80*176,5*233	92*238*283
Net Weight, Kg	3.5	3.6	6.5
Gros Weight, Kg	4.5	4.6	7.9
OPERATING ENVIRONMENT			
Operation temperature: 0°C to 40°C			
Storage Temperature: -15°C to 40°C			
Operation humidity: 20% to 90%			

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LIMITED WARRANTY

Liebert Corporation extends the following LIMITED WARRANTY to the purchaser and to its customer (collectively referred to as the "Purchaser"): the enclosed Uninterruptible Power System (UPS) and components are free from defects in materials and workmanship under normal use, service, and maintenance FOR A PERIOD OF TWO YEARS FROM THE DATE OF ORIGINAL PURCHASE from Liebert or the Liebert dealer or retailer. THE FOREGOING WARRANTY IS THE ONLY WARRANTY GIVEN AND NO OTHER WARANTY IS PROVIDED, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Certain aspects of disclaimers are not applicable to consumer products acquired by individuals and used for personal, family, or household purposes (as distinguished from industrial or other purposes). Local laws may not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary according to local law.

Certain repairs or services are the responsibility of the Purchaser and the Purchaser is expected to pay for them. This warranty does not extend either to products with removed or altered serial numbers or to any losses or damages due to act of God or source external to the product, misuse, accident, abuse, neglect, negligence, unauthorized modification, alteration, or repair, use beyond rated capacity, or improper installation, maintenance, application or use, including, without limitation, use in a manner contrary to the accompanying instructions or applicable codes. WARNING: Warranty is void if the battery is allowed to discharge below the minimum battery cutoff point. To prevent such discharge DO NOT leave the unit power switch "ON" for more than two (2) days without AC power being supplied to the UPS. The battery must be recharged every four (4) to six (6) months when not in use.

If the UPS fails to conform with the above warranty within the two year warranty period, Liebert will repair or replace the UPS, at Liebert's option. Repairs or replacements are warranted for the remainder of the original warranty period. To make a warranty claim, purchaser should call a Liebert Representative to obtain a Returned Goods Authorization number and shipping instructions. Return transportation costs to Liebert are the responsibility of the Purchaser.

"LIFE SUPPORT" APPLICATIONS

Due to the diversity of applications and considerations to be applied in each case, Liebert does not recommend or knowingly sells its products for such use.

The responsibility for risk assessment and management in applications where the malfunction or failure of the UPS could be reasonably expected to give rise to a risk of human life shall be the sole responsibility of the purchaser. Liebert accepts no liability for consequential harm in such applications.

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PowerSure™ Personal XT

450, 700, 1250 VA 230V

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Web site	http://www.liebert.com
Worldwide FAX tech support	+614-841-5471

The Company Behind The Products

With more than 1.000.000 installations around the globe, Liebert is the world leader in computer protection systems. Since its founding in 1965, Liebert has developed a complete range of support and protection systems for sensitive electronics:

- Environmental systems: close-control air conditioning from 1.5 to 60 tons.
- Power conditioning and UPS with power ranges from 250 VA to more than 1000 kVA.
- Integrated systems that provide both environmental and power protection in a single, flexible package.
- Monitoring and control - on-site or remote - from systems of any size or location
- Service and support, through more than 100 service centers around the world, and a 24-hour Customer Response Center.

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